824 39. Plectrum for the musical bow, elém (stalk strips).
40. Strings for the harp (fiber).
41. Sticks for the war drum, ngómo (made of pith).
42. Sticks for the signaling drum, nkŭ (stalk pieces). /78/
43. Children's zither (halved stalks; plectrum; stalk pieces).

VIII. Toys

44. Children's rattle stick (pith, stalk pieces).
45. Bow and arrows (stalks).
46. Rifle made of pith, newer model (pith).
47. Trigger and upper part of rifles, old model (stalk strips).
48. Pickaxes, knives, tools (pith).
49. Trap for gadflies (pith, stalk pieces).
50. Food stealer (piece of stalk).
51. Memory game, nkŭk endĕlĕ (pith).
52. Stone game, akŭń (stalk pieces).

IX. Clothing, Ornaments

53. Straw hats (pith).
54. Chenille for decorative caps, edŏbăn (pith).
55. Women's tailpieces (bast).
56. Strips of bast for sewing materials (bast).
57. Head adornment, akūt (bast).
58. Arm adornment (bast).
59. Neck adornment (bast).
60. Belts (bast).
61. Ropes for stringing heavy beads (fiber).
62. Walking sticks, better ones made of Raphia hookeri M. (esa).

● 343 In addition to the meeting and dwelling houses already described, the Pangwe build a number of other huts designed for special purposes, namely, storage houses, houses for strangers, field huts, and houses for the sick.

The storage houses have a variety of forms. Some are merely dwellings from which the furniture has been removed; [177] others are similar to these but have a wooden door, often copied from the European models; still others, like the temporary

dwellings, stand with the gabled side facing the village square and look just like them except that they are firm and durable. Storage houses are to be found only in the villages of wealthier chiefs.

The houses for strangers (esá'bád) are built following exactly the same pattern and ground plan as the ordinary dwelling, but they are very hastily constructed: the walls are usually only plaited palm leaves; the door extends to the ground with no threshold; and the sleeping benches are those of the simple kind (kū'dū III), often made only of umbrella tree trunks split lengthwise down the middle and placed on top of two casters of the same wood. They are constructed especially on the occasion of the festival for departed souls when greater numbers of strangers are expected; at the conclusion of the festive period they are pulled down.

In the forests or on very isolated plantations, refuge huts are frequently built. These are often no more than mere protective roofs (myō e ngī III = gorilla home), while others resemble the simplest temporary meeting houses, that is, huts in which the gabled sides are open and the long walls are either absent or consist only of a few tree trunks (angó n e ngī = gorilla crown, that is, the strip which juts out like a comb on the top of the gorilla's skull). /79/

Special houses are built next to or behind the dwellings or just outside the village for persons with contagious diseases (frambesia, leprosy) (see Fig. 16). Because they are designed for only one person, they are usually smaller than the dwellings; they have the same shape but are carelessly constructed and soon deteriorate because nobody takes the trouble to repair them.

Here and there I found stables; in the next section I shall come back to these. /Fig. 42 appears here in the original text./

Finally, it should be mentioned that in some villages especially those close to the coast, there are houses on piles. These are copied from the European settlements and are almost completely useless for the natives since their construction requires greater care and trouble than that of ordinary houses. Consequently, the houses on piles built by the Pangwe are veritable caricatures of human dwellings.

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showed that the ore "exhibits a not inconsiderable titanium content, some sulphur, traces of phosphoric acid, a small calcium content, as well as a small magnesium content, in addition to the usual components, such as silicic acid, iron oxide, aluminum oxide, water, and small quantities of manganese."

[423] simply collected and carried off. The iron ore pits (ebɛ̂-asɛ́l from asɛ́l, "rock containing iron") have no special significance for the Pangwe; they are common or rather ownerless property that could be claimed by anyone. The smelting of the iron ore, on the other 325 hand, takes place in special smelting huts which are usually the 423 common property of several fellow villagers; they alone may produce the iron from the ironstone which they themselves have extracted from the pits. The other people in the village may not use the smelting hut and must buy iron from them. Because of the difficulties involved in the enterprise, smelting is done only at /227/ widely separated intervals of time. On each occasion the furnace is loaded rapidly as many times in succession as there are hut owners on hand. Each owner, therefore, has a claim to the iron obtained from one loading of the furnace.

325 The smelting hut (ndɛ̄-akūɛ̄, ndɛ̄i-akūa), Figures 181 and 182,
● 343 is a simple lean-to, three to four meters high, whose ridge pole is supported by two beams. A pit (Fig. 182, Drawing 5, c), 78 centimeters deep and 1.86 meters in diameter, is dug into the ground in the center of the hut and the furnace is built over it. Another shaft (Drawing 5, b), about 60 centimeters deep, goes down from the floor of the pit, and it is on the bottom of this shaft that the above-mentioned pot with the smelting medicine is placed (Drawing 5, a). The medicine is covered with rotten leaf sheaths from the plantain so that the skulls will stay nice and cool, and then the entire shaft is filled with leaves.

325 If smelting is contemplated, all the participants, that is, the
372 medicine man, the hut owner or owners, and the hired workers, must, as was mentioned, abstain for two months from sexual

325 372 intercourse. During this period, the ore is carried to the hut in baskets and piled up there, and charcoal (miĕ, mĕ̄i) is obtained. The charcoal must be especially "strong," and for that reason it is obtained only from the following five trees: 1) Pentaclethra [324] macrophylla Benth., Leguminosae (ebā'); 2) Erythrophloeum guineense Don., Leguminosae (elŭn); 3) Cylicodiscus gabunensis Harms, Leguminosae (edŭm); 4) Eurypetalum tessmannii Harms, Leguminosae (andzĭtsŭ); 5) Irvingia grandifolia Engl., Simarubaceae (ngŭn IV). The wood is heaped up in small piles near the village, set on fire, and, when it is charred, extinguished while still glowing. The water with which it is extinguished is skillfully squirted out of the mouth like a shower.

325 343 834 In Bebai, among the Schumu family (Woddo region) where I saw the smelting, a smaller hut stood next to the smelting hut (Fig. 182, Drawing 2); this hut contained nothing but a sleeping bench (p), a poker hook (q), and a number of spare blast pipes (r) for the furnace. The hut owner for whom the smelting was to be done the next day spent the last night in it in order not to succumb to the temptation of violating the above-mentioned rule at the last moment. This precautionary measure shows how steadfastly the Pangwe actually observe the many commandments.

325 In the morning the workers appear with their tools, the blast pipes (ŭŏ̄n IV), and bellows.

The bellows without valve -- but in contrast, it does not have wooden sticks used as handles. It is made of soft wood (see page 240); from its two bowl-shaped enlargements (Pangwe: alŏ̄-nkŭ̄m, "bellows ears") separate shafts lead /228/ /Fig. 181 appears here in the original text/ into the tip (Pangwe: ndzŭ̄ĭ'-nkŭ̄m, "bellows [281] nose"). The bowls are covered with animal hide with the hairy side inward, or (only among the Jaunde) with leaf sheaths of the banana tied together in a tuft. Since the hides are moved directly by hand and not by means of sticks, only soft hides can be used, such as those of the long-tailed monkeys, the potto, the civet cat, and the African dwarf buck Neotragus batesi Winton.

The pit in the smelting hut is stuffed full to the rim with leaves of the umbrella tree, so that after the completion of the smelting process it can be cleaned of the charcoal remains without any

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Fig. 181. Smelting Hut in Bébai (Schumu Family), Spanish Guinea.

325 difficulty and so that the medicine lying below will not be dirtied. Then plantain or banana stems (d) as tall as a man are planted close to each other in a circle around the pit; by means of transverse pegs made of raffia leafstalk bark they are joined to each other and with ropes and stakes are fastened to thick posts driven into the ground outside. The whole arrangement is held together above and below with ropes of Cissus runners, called ntũ, and carefully plugged with smaller plantain stems (Drawing 4, f) or pieces of the same. By notching two neighboring plantain stems, holes are cut a little above the ground -- in Bebai there were 17 such holes -- for the blast pipes. Provisionally, the holes are filled up with a guide rod 1.25 meters long and corresponding in thickness to the blast pipe /229/ (ntũ'm e zõ̱n, really blast-pipe

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Plate XVII

Iron Smelting in Bebai (Schumu Family), Spanish Guinea.

1: Tessmann--343 E-5 (1904-1909) 1913 FH9 Fang FH9